



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

52

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,735	10/22/2003	Brian Trevor Denton	BUR920030060US1	2734
28211	7590	05/17/2005	EXAMINER	
FREDERICK W. GIBB, III MCGINN & GIBB, PLLC 2568-A RIVA ROAD SUITE 304 ANNAPOLIS, MD 21401			RODRIGUEZ, PAUL L	
			ART UNIT	PAPER NUMBER
			2125	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/605,735	Applicant(s) DENTON ET AL.	
	Examiner Paul L. Rodriguez	Art Unit 2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/22/03, 10/28/03</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. Claims 1-21 are presented for examination.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims merely recite a method that can be performed by one of ordinary skill through mental steps, a person can perform the steps of identifying, providing restrictions, formulating restrictions as mathematical expressions, solving for optimum material substitutions, or combining mathematical expressions. The claims as recited are not technically embodied and they are simply directed to an abstract idea. While a machine, such as a programmed computer as, can perform the steps, as written the claims do not require a machine to perform the steps. Because there is support in the specification, it is recommended that the claims be amended to add language such as "A computer implemented production planning method..." to provide a technical embodiment to the claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by

Kuribayashi et al (U.S. Pat 6,002,650). See figure 23, col. 9 lines 6-16, col. 11 lines 15-30, col.

Art Unit: 2125

28 lines 17-31 and claim 22. Examiner would like to point out that any reference to specific figures, columns and lines should not be considered limiting in any way, the entire reference is considered to provide disclosure relating to the claimed invention.

5.

6. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiroshige et al (U.S. Pub 2002/0095348). The claimed invention reads on Hiroshige et al as follows:

Hiroshige et al discloses (claim 1) a production planning method (abstract, paragraph 54, 62, 65) comprising identifying substitute components that can be used in place of original components in assemblies and providing restrictions on use of said substitute components to subsets of assemblies, such that a substitute component may be substituted for an original component in a first assembly and may not be substituted for said original component in a second assembly (paragraph 200, claim 27), (claim 2) wherein said restrictions are based on one of client requirements and engineering constraints (paragraph 11, 200, figure 3), (claim 3) wherein said restrictions provide for multiple substitutions of said substitute components for original components in said assemblies (paragraph 200), (claim 4) wherein said substitute components perform the same function and are structurally different (paragraph 200, larger or faster), (claim 5) wherein said substitute components are used in place of original components to increase manufacturing efficiency (paragraph 10). Examiner would like to point out that any reference to specific figures or paragraphs should not be considered limiting in any way, the entire reference is considered to provide disclosure relating to the claimed invention.

Art Unit: 2125

7. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Dietrich et al (U.S. Pat 5,630,070). The claimed invention reads on Dietrich et al as follows:

Dietrich et al discloses (claim 1) a production planning method (abstract) comprising identifying substitute components that can be used in place of original components in assemblies (col. 25 lines 7-16, col. 27 lines 1-20) and providing restrictions on use of said substitute components to subsets of assemblies, such that a substitute component may be substituted for an original component in a first assembly and may not be substituted for said original component in a second assembly (col. 25 lines 10-13).

(Claim 6, differing from claim 1) formulating said restrictions as mathematical expressions for each substitute component (col. 4 lines 1-15) and solving for optimum material substitutions using said mathematical expressions (col. 14 lines 39-43, col. 21 lines 45-53, col. 25 lines 13-16, col. 26 lines 35-34, col. 27 lines 17-20).

(Claim 13, differing from claim 6) combining mathematical expressions of components that have the same restrictions (col. 4 lines 16-42, matrix considered a combination of).

(Claims 2, 7, 14) wherein said restrictions are based on one of client requirements and engineering constraints (BOM, BOR, col. 25 lines 18-24).

(Claim 3) wherein said restrictions provide for multiple substitutions of said substitute components for original components in said assemblies (col. 3 lines 47-67, one or more materials one or more resources).

(Claim 4, 11, 18) wherein said substitute components perform the same function and are structurally different (col. 27 lines 1-12, each memory each structure different).

Art Unit: 2125

(Claim 5, 12, 19) wherein said substitute components are used in place of original components to increase manufacturing efficiency (col. 5 line 63 – col. 6 line 4, col. 25 lines 13-16, col. 27 lines 17-19, col. 32 line 20 – col. 34 line 51, col. 36 line 4 – col. 38 line 30).

(Claim 8, 15) wherein said mathematical expressions provide for multiple substitutions of said substitute components for original components in said assemblies (col. 25 lines 13-16, substitution resources, plural, anticipates multiple).

(Claim 9, 16) wherein during said solving process said mathematical expressions set the quantity of substitutions to be no greater than a multiple of the number of associated assemblies (Examiner considered the quantity of substitutions to be inherently bounded, however a multiple of associated assemblies could be any value).

(Claim 10, 17) wherein said mathematical expressions comprise linear mathematical expressions (Abstract).

(Claim 20) further comprising removing said restrictions for components that are acceptable to all assemblies (inherent, if a component is acceptable to all assemblies there would be no restrictions to remove).

Examiner would like to point out that any reference to specific figures, columns and lines should not be considered limiting in any way, the entire reference is considered to provide disclosure relating to the claimed invention.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2125

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dietrich et al (U.S. Pat 5,630,070) in view of Milne et al (U.S. Pat 6,049,742).

Dietrich et al teaches most all of the instant invention as applied to claims 1-20 above and is also considered to teach subsets of customers (col. 34 lines 52 – col. 35 line 63, previous orders, new orders considered customer subsets). Dietrich et al fails to teach a production/distribution planning method and substitute part numbers.

Milne et al teaches a production/distribution planning method (abstract, col. 6 lines 1-5) comprising identifying substitute part numbers that can be used in place of original part numbers (col. 4 lines 55-58, col. 11 lines 32-40).

Dietrich et al and Milne et al are analogous art because they are both related to resource planning.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the production and distribution planning and substitute part

Art Unit: 2125

numbers of Milne et al in the resources planning method of Dietrich et al because Milne et al teaches a computer implemented decision support tool that matches assets and demands within the boundaries established by the manufacturing specifications, process flows and business policies and ensures that the delivery commitments are met in a timely fashion (col. 4 lines 34-45) also a tool that pulls the required production and distribution information from various legacy systems and stores them in the required format, improving system interoperability and flexibility (col. 6 lines 1-5).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hirth et al (U.S. Pub 2003/0171962) – teaches a method and apparatus for production planning that can determine an acceptable substitute product based upon customer provided parameters.

Ferreri et al (U.S. Pub 2003/0046191) – teaches a method for determining if a substitute component is available or not.

Hinckley (U.S. Pub 2002/0055886) – teaches a system and method where design engineers identify more than one component that meets the specification requirements so that approved substitute components can be identified.

Bellini et al (U.S. Pat 5,974,395) – teaches a system and method where a supply chain can allow for heavy substitutions between vendors and suppliers of products and parts.

Gupta et al (U.S. Pat 5,825,651) – teaches a method and apparatus for configuring a system where parts can be substituted from different groups.

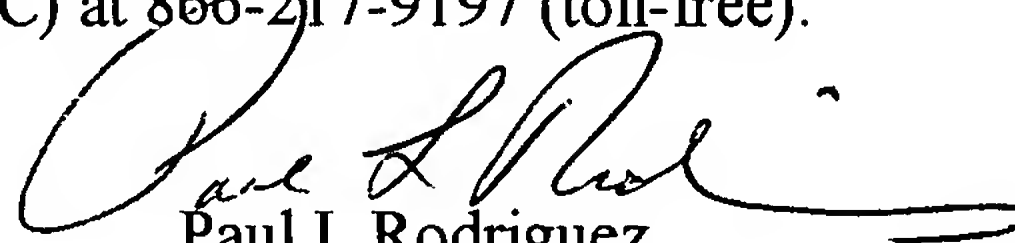
Art Unit: 2125

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul L. Rodriguez whose telephone number is (571) 272-3753.

The examiner can normally be reached on 6:00 - 4:30 T-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Paul L Rodriguez
Primary Examiner
Art Unit 2125

PLR
5/13/05